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November 22, 1983

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CIA HEADQUARTERS
Room 4E50
Washington, DC 20505

REFERENCE: CENTRIFUGAL WATER CHILLERS
NEW OFFICE BUILDING ADDITION

STAT Dear [redacted]

During our telephone conversation the other day, I briefly explained our concern over the specification for the centrifugal water chillers for your proposed building expansion.

Our Detroit office has been in close contact with your Architect/Engineer (Smith, Hinchman, Gryles and Associates) and we understand that the plan is to replace some of the older chillers in the equipment room. I believe that your consulting engineer was initially planning to use four (4) new chillers approximately 2150 tons each. Three (3) chillers would be able to handle the designed 6400 ton cooling load and the fourth chiller was for standby.

We understand that in order to reduce the first cost, the centrifugal chillers were changed to packaged hermetic type units at a capacity of 1600 tons each. Therefore four (4) units are required to handle the designed 6400 ton cooling load and a fifth chiller is for standby.

We feel that your decision to change to the package type equipment for a chilled water plant of this size is a mistake. There are many differences in this equipment, and we would like to briefly explain what we see as the main three differences -- quality, reliability, and operating and maintenance economy.

Quality: The original chillers selected for this project were the heavy-duty industrial type with over 30 years of proven performance. Industrial grade components are selected to provide the exact capacity required with a very

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efficient operation. The heart of the system, the compressor, is used in industry for duties ranging from very low temperatures (-180°F) refrigeration duty, to the continuous natural gas well compression, to normal air conditioning duty.

The package chillers being considered have been on the market for less than 3 years. They utilize the less expensive hermetic motor/compressor design and they are an entirely different grade of equipment.

Reliability: The reliability of the industrial type chiller has been proven over many years of operation on various types of cooling applications. You may want to discuss the operation and reliability of this type of equipment with operators that have first-hand experience. We would suggest that you contact the following:

Pentagon
National Bureau of Standards
Capitol Power Plant
National Institute of Health
C.I.A. (your existing plant has 2 units)

The National Gallery of Art has just purchased three (3) units and equipment reliability was the governing factor.

Hermetic type chillers have a much higher risk factor than the open motor type chillers and this fact can be verified with Hartford Steam Boiler and Inspection Insurance Company or any other equipment insurance company.

Operating & Maintenance Economy: We mentioned before that industrial type chillers are selected to provide the exact capacity with a very efficient operation. We would expect 2150 ton chillers to have a full load energy use of no more than .62 KW/TON.

The package hermetic chillers will have a full load energy use of from approximately .693 KW/TON, for one manufacturer, and approximately .73 KW/TON for the other manufacturer. When you compare these full load energy uses to the total design 6400 ton cooling load, you can see that the package chillers will utilize from 467 KW to 704 KW more energy per full load hour of operation than the chillers we propose.

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Maintenance cost will also be reduced with the chillers we propose for the following reasons:

1. Less equipment to maintain (4 units vs. 5)
2. We give a 10% decrease in maintenance contract price for chillers with open motors
3. The deterioration of hermetic motor insulation due to the refrigerant may require that the hermetic motor be re-insulated every 7-8 years to avoid major equipment failure. Open motors are not subjected to the refrigerant, thus this insulation deterioration does not occur.

We hope that you will give us the opportunity to meet with you and discuss this equipment further. We would also like to take you to an installation near by (like the Pentagon) to show you these units first hand. We have attached a copy of our Form 160.71-EG1 (579) that gives a description of the centrifugal chillers we would like you to specify. We will call on November 30th to set up a meeting.

Thank you for your consideration.

Very truly yours,

C. Louis Clark

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District Manager